4-291-689-**11** (1)

SONY

# HD Camera Control Unit

The supplied CD-ROM includes operating instructions for the HXCU-D70 HD Camera Control Unit (Japanese, English, French, German, Italian, Spanish and Chinese versions) in PDF format. For more details, see “Using the CD-ROM Manual” on page 7.

## Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

## HXCU-D70

HDMI



4291689110

## Owner's Record

The model and serial numbers are located at the rear. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No._____ Serial No._____

## WARNING

**To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.**

**To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.**

**THIS APPARATUS MUST BE EARTHED.**

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING:** THIS WARNING IS APPLICABLE FOR USA ONLY.

If used in USA, use the UL LISTED power cord specified below.
DO NOT USE ANY OTHER POWER CORD.

| | |
|---|---|
| Plug Cap | Parallel blade with ground pin (NEMA 5-15P Configuration) |
| Cord | Type SJT, three 16 or 18 AWG wires |
| Length | Minimum 1.5 m (4 ft. 11in.), Less than 2.5 m (8 ft. 3 in.) |
| Rating | Minimum 10A, 125V |

Using this unit at a voltage other than 120V may require the use of a different line cord or attachment plug, or both. To reduce the risk of fire or electric shock, refer servicing to qualified service personnel.

**WARNING:** THIS WARNING IS APPLICABLE FOR OTHER COUNTRIES.

1. Use the approved Power Cord (3-core mains lead)/ Appliance Connector/Plug with earthing-contacts that conforms to the safety regulations of each country if applicable.
2. Use the Power Cord (3-core mains lead)/Appliance Connector/Plug conforming to the proper ratings (Voltage, Ampere).

If you have questions on the use of the above Power Cord/ Appliance Connector/Plug, please consult a qualified service personnel.

### For kundene i Norge

Dette utstyret kan kobles til et IT-strømfordelingssystem.

### For the customers in the U.S.A.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

All interface cables used to connect peripherals must be shielded in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**For the customers in Canada**

This Class A digital apparatus complies with Canadian ICES-003.

### For the customers in Europe

This product with the CE marking complies with the EMC Directive issued by the Commission of the European Community.
Compliance with this directive implies conformity to the following European standards:

- EN55103-1: Electromagnetic Interference(Emission)
- EN55103-2: Electromagnetic Susceptibility(Immunity)

This product is intended for use in the following Electromagnetic Environment: E4 (controlled EMC environment, ex. TV studio).

### For the customers in Europe, Australia and New Zealand

**WARNING**

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

### For the customers in Europe

The manufacturer of this product is Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.
The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

This apparatus shall not be used in the residential area.

### For the State of California, USA only

Perchlorate Material - special handling may apply, See www.dtsc.ca.gov/hazardouswaste/perchlorate
Perchlorate Material : Lithium battery contains perchlorate.

### For the customers in Taiwan only

廢電池請回收

## AVERTISSEMENT

**Afin de réduire les risques d'incendie ou d'électrocution, ne pas exposer cet appareil à la pluie ou à l'humidité.**

**Afin d'écarter tout risque d'électrocution, garder le coffret fermé. Ne confier l'entretien de l'appareil qu'à un personnel qualifié.**

**CET APPAREIL DOIT ÊTRE RELIÉ À LA TERRE.**

**AVERTISSEMENT:**

1. Utilisez un cordon d'alimentation (câble secteur à 3 fils)/ fiche femelle/fiche mâle avec des contacts de mise à la terre conformes à la réglementation de sécurité locale applicable.
2. Utilisez un cordon d'alimentation (câble secteur à 3 fils)/ fiche femelle/fiche mâle avec des caractéristiques nominales (tension, ampérage) appropriées.

Pour toute question sur l'utilisation du cordon d'alimentation/ fiche femelle/fiche mâle ci-dessus, consultez un technicien du service après-vente qualifié.

**Pour les clients au Canada**
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

### Pour les clients en Europe

Ce produit portant la marque CE est conforme à la Directive sur la compatibilité électromagnétique (EMC) émise par la Commission de la Communauté européenne.
La conformité à cette directive implique la conformité aux normes européennes suivantes:

- EN55103-1: Interférences électromagnétiques (émission)
- EN55103-2: Sensibilité électromagnétique (immunité)

Ce produit est prévu pour être utilisé dans l'environnement électromagnétique suivant: E4 (environnement EMC contrôlé, ex. studio de télévision).

### Pour les clients en Europe, Australie et Nouvelle-Zélande

**AVERTISSEMENT**
Il s'agit d'un produit de Classe A. Dans un environnement domestique, cet appareil peut provoquer des interférences radio, dans ce cas l'utilisateur peut être amené à prendre des mesures appropriées.

### Pour les clients en Europe

Le fabricant de ce produit est Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japon.
Le représentant autorisé pour EMC et la sécurité des produits est Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Allemagne. Pour toute question concernant le service ou la garantie, veuillez consulter les adresses indiquées dans les documents de service ou de garantie séparés.

Ne pas utiliser cet appareil dans une zone résidentielle.

## WARNUNG

**Um die Gefahr von Bränden oder elektrischen Schlägen zu verringern, darf dieses Gerät nicht Regen oder Feuchtigkeit ausgesetzt werden.**

**Um einen elektrischen Schlag zu vermeiden, darf das Gehäuse nicht geöffnet werden. Überlassen Sie Wartungsarbeiten stets nur qualifiziertem Fachpersonal.**

**DIESES GERÄT MUSS GEERDET WERDEN.**

**WARNUNG**

1. Verwenden Sie ein geprüftes Netzkabel (3-adriges Stromkabel)/einen geprüften Geräteanschluss/einen geprüften Stecker mit Schutzkontakten entsprechend den Sicherheitsvorschriften, die im betreffenden Land gelten.
2. Verwenden Sie ein Netzkabel (3-adriges Stromkabel)/ einen Geräteanschluss/einen Stecker mit den geeigneten Anschlusswerten (Volt, Ampere).

Wenn Sie Fragen zur Verwendung von Netzkabel/ Geräteanschluss/Stecker haben, wenden Sie sich bitte an qualifiziertes Kundendienstpersonal.

## Für Kunden in Europa

Dieses Produkt besitzt die CE-Kennzeichnung und erfüllt die EMV-Richtlinie der EG-Kommission.
Angewandte Normen:

- EN55103-1: Elektromagnetische Verträglichkeit (Störaussendung)
- EN55103-2: Elektromagnetische Verträglichkeit (Störfestigkeit)

Für die folgende elektromagnetische Umgebung: E4 (kontrollierter EMV-Bereich, z.B. Fernsehstudio).

## Für Kunden in Europa, Australien und Neuseeland

**WARNUNG**

Dies ist eine Einrichtung, welche die Funk-Entstörung nach Klasse A besitzt. Diese Einrichtung kann im Wohnbereich Funkstörungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen durchzuführen und dafür aufzukommen.

## Für Kunden in Europa

Der Hersteller dieses Produkts ist Sony Corporation, 1-7-1 Konan, Minato-ku, Tokyo, Japan.Der autorisierte Repräsentant für EMV und Produktsicherheit ist Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Deutschland. Bei jeglichen Angelegenheiten in Bezug auf Kundendienst oder Garantie wenden Sie sich bitte an die in den separaten Kundendienst- oder Garantiedokumenten aufgeführten Anschriften.

Dieser Apparat darf nicht im Wohnbereich verwendet werden.

# Table of Contents

# Overview

The HXCU-D70 Camera Control Unit (CCU) connects to the Sony HXC-D70 HD Color Camera. It performs signal processing, provides an interface for external equipment, and supplies power to the camera.
The CCU can be combined with an RCP-1000-series Remote Control Panel (optional) to form a camera control system.

## Features

### The HXCU-D70 can be connected with a single multi-core cable

A camera control system with the HXC-D70 high resolution HD color camera can be built up using just one Sony-standard multi-core cable (CCZ-A).

### Easy-to-use control panel

The HXCU-D70 has a fully-functional, ergonomically-designed front panel that includes basic adjustment of the monitor image.

### Multi-system input/output interface

The HXCU-D70 includes the following input and output signal connectors to manage various system setups.

#### Video outputs

- SDI (main), 2-system (HD/SD selectable, embedded audio)
- SDI (monitor), 2-system (HD/SD selectable, embedded audio, superimposed character and marker display)
- HDMI[1)], 1-system (monitor)
- Analog composite (VBS 2-system, PIX 1-system)
- Analog component, 1-system (HD Y/Pb/Pr, HD R/G/B, SD Y/R-Y/B-Y, SD R/G/B 4-format selectable)
- S-VIDEO, 1-system
- Sync, 1-system (HD/SD selectable)

1) HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing, LLC.

#### Video inputs

- Reference input (HD/SD auto-select)
- VBS return input, 2-system
- VBS teleprompter input, 1-system

#### Audio inputs/outputs

- Audio output, 2-system (XLR-3-pin)
- Intercom headset input/output (XLR-5-pin)
- System intercom input/output (D-sub 25-pin)
  - Intercom input/output, 2-system (PROD, ENG, 4W/RTS/CC selectable)
  - PGM (program audio) input, 1-system

#### Other inputs/outputs

- TRUNK (RS-232C, D-sub 9-pin)
- REMOTE (8-pin, round)
- LAN (RJ-45, 8-pin)
- D-sub 25-pin inputs/outputs (shared with the system intercom input/output connector)
  - Tally input, 2-system (R/G)
  - Tally output, 2-system (R/G)
  - PREVIEW output

### External sync signal input

The CCU can be locked to an external sync signal. Either an HD tri-level sync signal or an SD sync (black burst) signal can be used as the sync signal.

### Low-loss digital transmission via multi-core cable

The camera unit can be connected with the Sony-standard multi-core camera cable (CCZ-A). The camera and CCU are equipped with the latest Sony-developed digital transmission technology to transmit high-resolution pictures between one another, regardless of the cable length.

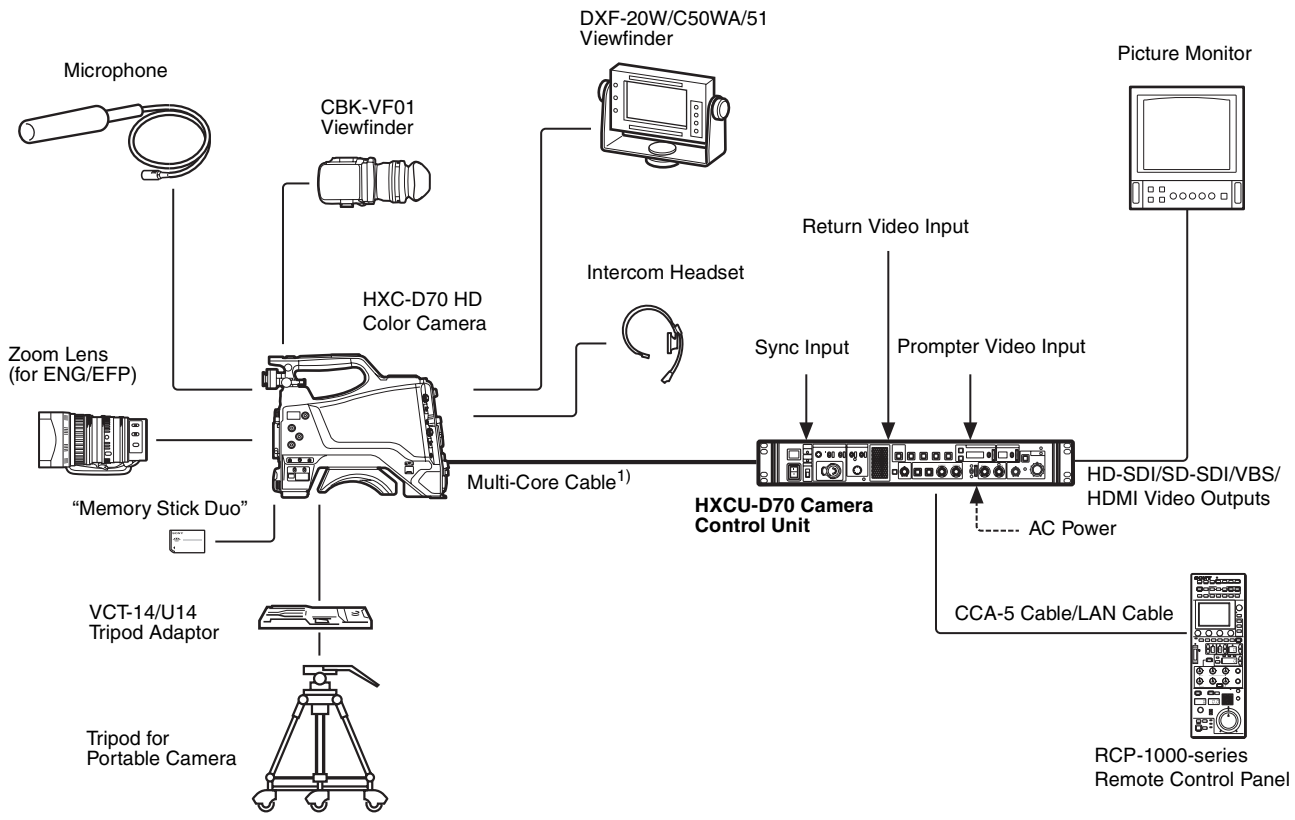
### Built-in wideband down converter

HD signals from the camera can be converted to high-resolution SD component SDI output signals using the wideband down converter. The output signal aspect ratio can be set to 4:3 edge crop, 16:9 squeeze, or letterbox.

### Rack mountable

The CCU can be installed in a standard EIA 19-inch rack. The height of the unit is 1.5U.

## System Configuration Example




1) An equivalent cable length of up to 100 m is approved.
*For details, see "Low-loss Digital Transmission via Multi-core Cable" (page 31).*

## Using the CD-ROM Manual

The supplied CD-ROM includes versions of the operating instructions for the HXCU-D70 in Japanese, English, French, German, Italian, Spanish and Chinese in PDF format.

### Reading the CD-ROM manual

#### Preparations

The following program must be installed on your computer in order to read the operating instructions contained on the CD-ROM.

- Adobe Reader Version 6.0 or higher

If Adobe Reader is not installed, you can download it from the following URL:
http://www.adobe.com/

Adobe and Adobe Reader are trademarks of Adobe Systems Incorporated in the United States and/or other countries.

#### To read the documents

To read the operating instructions contained on the CD-ROM, do the following.

**1** **Insert the CD-ROM in your CD-ROM drive.**
A cover page appears automatically in your browser. If it does not appear automatically in the browser, double click on the index.htm file on the CD-ROM.

**2** **Select and click on the operating instructions that you want to read.**
This opens the PDF file of the operating instructions.

**Memo**

The files may not be displayed properly, depending on the version of Acrobat Reader. In such a case, install the latest version you can download from the URL mentioned in "Preparations" above.

**Note**

If you have lost or damaged the CD-ROM, you can purchase a new one to replace it. Contact your Sony dealer or a Sony service representative.

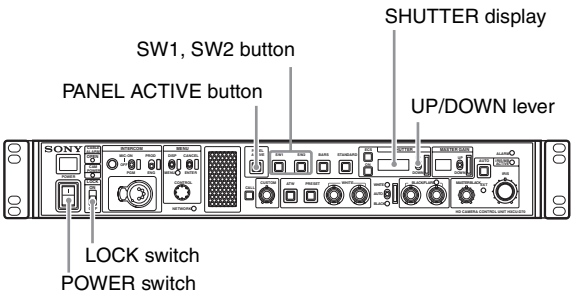
# Preparations

## Area Settings

### Before using the unit

There is no default area setting. Set the area where you intend to use this unit first.

### Setting the area




**1** **Turn the power on.**
The camera does not need to be connected to perform this setting.

**2** **Set the LOCK switch to OFF and make sure that the PANEL ACTIVE button is not illuminated.**
If the PANEL ACTIVE button lights up, press the button to turn the light off.

**3** **Press and hold down the SW1 and SW2 buttons at the same time for more than two seconds.**
The unit switches to setting mode and selectable setting values appear in the SHUTTER display.

**4** **Release the buttons after the unit switches to setting mode.**

**5** **Select the desired area, using the UP/DOWN lever, within five seconds after the unit switches to setting mode.**

| Settings | Areas |
|---|---|
| 60,5 | NTSC (except Japan)[a)] |
| 60, | NTSC (Japan)[b)] |
| 50, | PAL [c)] |

a) NTSC composite video signal output with a black setup (7.5 IRE). System frequency: 59.94i
b) NTSC composite video signal output with no black setup. System frequency: 59.94i
c) PAL composite video signal output. System frequency: 50i

**Note**

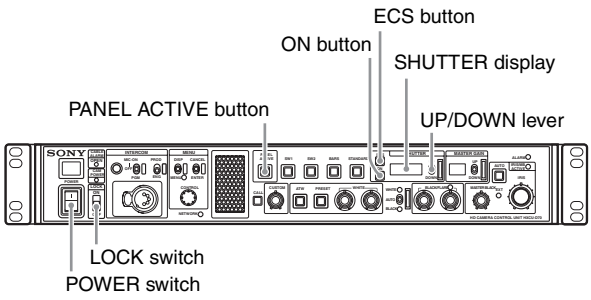
The setting mode is deactivated unless setting starts within five seconds after the unit switches to setting mode. Follow step **3** again to activate setting mode.

"- - - -" appears in the SHUTTER display five seconds after setting. Area settings are stored and the units switches to normal mode.

## CABLE COMPENSATION Settings

You can set cable compensation according to the multi-core cable length between the camera and CCU. A built-in cable compensation circuit compensates for the frequency losses in the cable. This way, losses in return video and prompter video inputs are minimized.

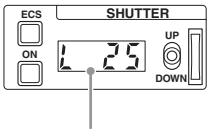
### Setting the CABLE COMPENSATION function




**1** **Turn the power on.**
The camera does not need to be connected to perform this setting.

**2** **Set the LOCK switch to OFF and make sure that the PANEL ACTIVE button is not illuminated.**
If the PANEL ACTIVE button lights up, press the button to turn the light off.

**3** **Press and hold down the SHUTTER ECS and ON buttons at the same time for more than two seconds.**
The unit switches to setting mode and setting values appear in the SHUTTER display.




Displayed numbers indicate cable length (unit: m).

**4** **Release the buttons after the unit switches to setting mode.**

**5** **Adjust the setting value according to the cable length, using the UP/DOWN lever, within five seconds after the unit switches to setting mode.**

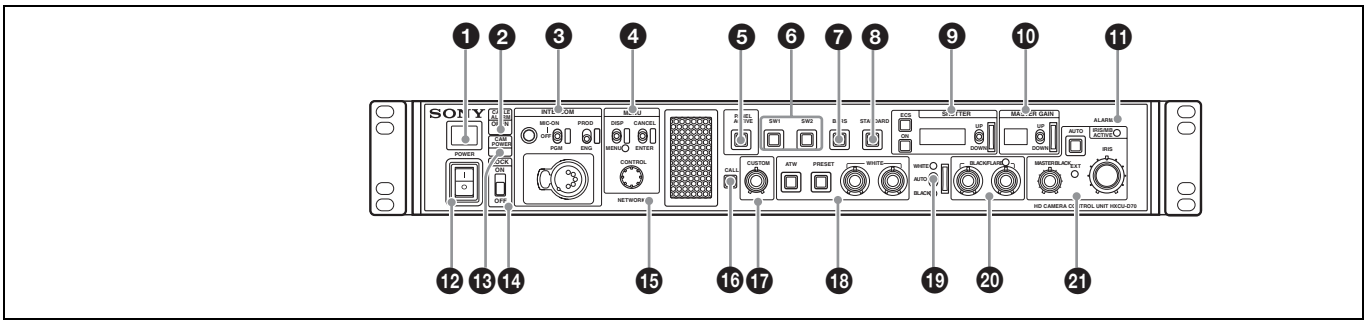
**Note**

The setting mode is deactivated unless setting starts within five seconds after the unit switches to setting mode. Follow step **3** again to activate setting mode.

"- - - -" appears in the SHUTTER display five seconds after setting. Cable compensation settings are stored and the units switches to normal mode.

# Locations and Functions of Parts

## Front Panel

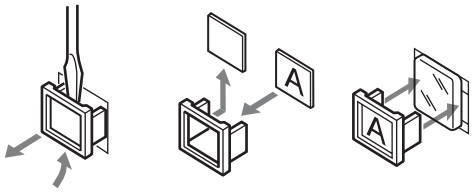



**❶ Tally light**

Turns on red to indicate a red tally signal is being received (such as when the picture from the camera connected to the CCU is being used). When the CALL button on the camera or the RCP-1000- series Remote Control Panel is pressed, the light turns off if lit or turns on if not lit.

Turns on green to indicate a green tally signal is being received.

A number plate supplied with the CCU can be attached here (*see the following figure*).

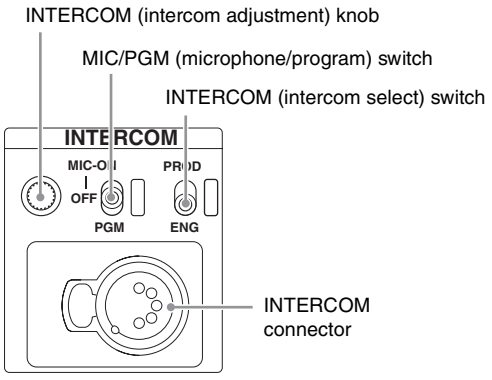



**❷ CABLE ALARM indicators**

**OPEN**: Turns on when a camera is not connected (open circuit) to the CAMERA connector on the rear panel via a multi-core cable. While on, the CCU does not supply any power to the camera.

It flashes when there is a problem with the transmission between the camera and the CCU.

**❸ INTERCOM audio input/output and control block**




- **INTERCOM (intercom adjustment) knob**

Adjusts the receiver audio level of the intercom.

- **MIC/PGM (microphone/program) switch**

**ON**: Turns the headset microphone on.

**OFF**: Turns the headset microphone off.

**PGM**: Selects program audio output. In this mode, the INTERCOM knob adjusts the headset program audio level.

- **INTERCOM (intercom select) switch**

Selects the intercom signal input/output connection source for the INTERCOM connector on the front panel.

**PROD**: Connects the producer line.

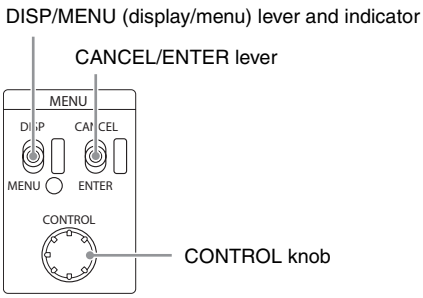
**ENG**: Connects the engineer line.

- **INTERCOM connector (XLR 5-pin)**

Connects the intercom headset.

*For information on pin assignment, see "INTERCOM" in "Pin assignment" on page 33.*

**❹ MENU control block**




- **DISP/MENU (display/menu) lever and indicator**

Selects the status display or setup menu display. In setup menu mode, the indicator turns on.

- **CANCEL/ENTER lever**

In setup menu mode, used to cancel and enter settings.

- **CONTROL knob (rotary encoder)**

In status screen mode, used to change the displayed page. In setup menu mode, used to move the cursor on a page and to change menu settings. Pressing the CONTROL knob performs the same function as setting the CANCEL/ENTER lever to the ENTER position.

**❺ PANEL ACTIVE button**
Activates the control panel to control the camera connected to the CCU (panel active state). When the button is lit, the IRIS/MB ACTIVE indicator also turns on simultaneously. When the button is not lit, the panel is deactivated (panel lock state) to prevent inadvertent operation.

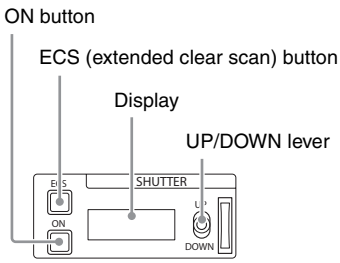
**❻ SW1, SW2 (assignable switch 1, 2) buttons**
Controls the function assigned to each button on the <FRONT PANEL 1> page in the CCU CONFIGURATION menu. The button light turns on/off as the assigned function is switched on/off.

*See "ASSIGNABLE/CUSTOM" on <FRONT PANEL 1> on page 27.*

**❼ BARS (color bars) button**
Switches on the color bar signal output to the monitor connected to the CCU (button light turns on). Pressing the button again restores the previous signal output.

**❽ STANDARD button**
Stores the current camera settings as the reference file data values in the camera (button light turns on for a few seconds). While the button is lit, pressing the button again cancels the operation and restores the previous data values.

**❾ SHUTTER control block**
Controls the shutter settings.




- **ON button**

Switches the normal shutter function or extended clear scan function on/off (button light turns on/off).

- **ECS (extended clear scan) button**

Switches the extended clear scan mode on/off (button light turns on/off).

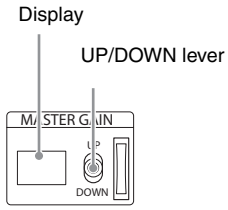
- **Display**

When the ECS button is lit: Displays the clear scan frequency.
When the ECS button is not lit: Displays the shutter speed.

- **UP/DOWN lever**

When the ECS button is lit: Adjusts the clear scan frequency. UP increases the frequency, and DOWN decreases the frequency.
When the ECS button is not lit: Adjusts the shutter speed. UP increases the shutter speed, and DOWN decreases the shutter speed.
Holding the lever UP or DOWN advances the setting in that direction.

**❿ MASTER GAIN control block**
Controls the video output signal gain in response to the lighting of the subject.




- **Display**

Displays the video output signal gain setting (dB units).

- **UP/DOWN lever**

Adjusts the video output signal gain setting (dB units).
UP increases the gain, and DOWN decreases the gain.
Holding the lever UP or DOWN advances the setting in that direction.

**⓫ ALARM indicator**
Lights up red to indicate an error in the CCU or camera system.

**⓬ POWER switch**
Switches the power for the entire system on and off, including the CCU, camera, and the RCP-1000-series Remote Control Panel connected to the REMOTE connector on the rear panel. Pressing the "**I**" side turns the camera system on, and pressing the "○" side turns it off.

**⓭ CAM POWER indicator**
Turns on when power is supplied to the camera.

**⓮ LOCK switch**
Locks the buttons on the front panel. Select the desired buttons to be locked on the <FRONT PANEL 3> page in the CCU CONFIGURATION menu.

*See "(LOCK TARGET)" on <FRONT PANEL 3> on page 29.*

**⓯ NETWORK indicator**
Displays the network system connection status.
**On**: Indicates that external control equipment (RCP-1000-series Remote Control Panel or other device) is connected.
**Flashing**: Indicates a connection problem with the external control equipment (RCP-1000-series Remote Control Panel or other device).
**Off**: Indicates that a LAN cable is not connected or that the network system connection parameters have not been set.

*See "Network diagnostics" on page 15 and NETWORK SETTINGS menu on page 29.*

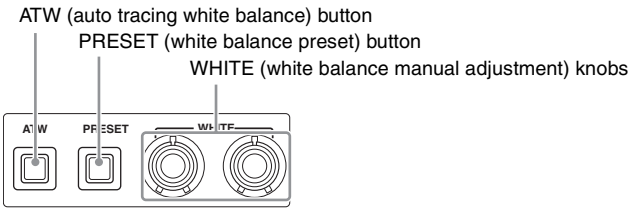
**⓰ CALL button**
Sends a call signal to the camera connected to the CCU and any external controller (such as the RCP-1000-series Remote Control Panel).
The CALL button is commonly used to raise the camera operator or external control equipment operators on the intercom.

### ⓱ CUSTOM (custom volume) knob

Controls the function assigned to the knob on the <FRONT PANEL 1> page in the CCU CONFIGURATION menu. Turning the knob adjusts the assigned function.

*See "VOLUME" on <FRONT PANEL 1> on page 27 and "CUSTOM" on <FRONT PANEL 2> on page 28.*

### ⓲ White balance adjustment control block




- **ATW (auto tracing white balance) button**

The white balance is automatically adjusted in response to the lighting conditions while this button is turned on and lit.

- **PRESET (white balance preset) button**

The white balance is automatically adjusted with a 3200K color temperature preset value while this button is turned on and lit.

- **WHITE (white balance manual adjustment) knobs**

Adjusts the white balance manually. The left knob adjusts the R coefficient, and the right knob adjusts the B coefficient.
The adjustment can be set to relative or absolute value mode on the <FRONT PANEL 1> page in the CCU CONFIGURATION menu. The default value is relative value mode.

*See "R/B WHITE" on <FRONT PANEL 1> on page 27 and "R/B WHITE" on <FRONT PANEL 2> on page 28.*

**Note**

When the ATW button is lit, the WHITE knobs are deactivated.

### ⓳ AUTO WHITE/BLACK (white balance/black balance auto adjustment) lever

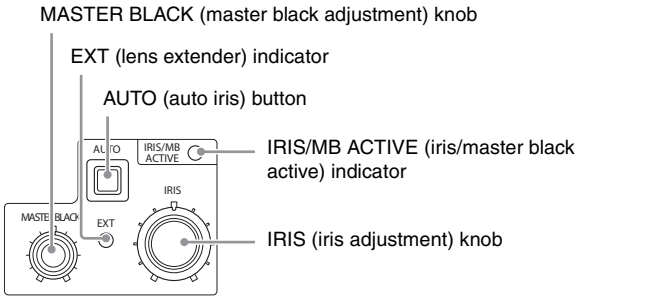
Initiates the white balance or black balance auto adjustment function.
WHITE automatically adjusts the white balance, and BLACK automatically adjusts the black balance.

### ⓴ BLACK/FLARE (black balance/flare balance manual adjustment) knobs and indicator

Adjusts the black balance and flare balance manually. When the indicator is not lit, the knobs adjust the black balance. When the indicator is lit, the knobs adjust the flare balance. The left knob adjusts the R coefficient, and the right knob adjusts the B coefficient.
The indicator operating mode (on/off function) can be set on the <FRONT PANEL 1> page in the CCU CONFIGURATION menu.
The adjustment can be set to black balance or flare balance adjustment in relative or absolute value mode on the <FRONT PANEL 1> page in the CCU CONFIGURATION menu. The default value is black balance adjustment in relative value mode.

*See "R/B BLACK" on <FRONT PANEL 1> on page 27 and "R/B BLACK" on <FRONT PANEL 2> on page 28.*

### ㉑ IRIS/MASTER BLACK adjustment control block




- **MASTER BLACK (master black adjustment) knob**

Adjusts the master black manually.
The adjustment can be set to relative or absolute value mode on the <FRONT PANEL 1> page in the CCU CONFIGURATION menu. The default value is relative value mode.

*See "M BLACK" on <FRONT PANEL 1> on page 27 and "M BLACK" on <FRONT PANEL 2> on page 28.*

- **EXT (lens extender) indicator**

Turns on to indicate that the lens extender is in-use on the camera.

- **AUTO (auto iris) button**

Switches the lens auto iris adjustment function on/off (button light turns on/off). The iris is automatically adjusted in response to the input light level.
When the button is not lit, the iris is adjusted manually.

- **IRIS/MB ACTIVE (iris/master black active) indicator**

Indicates, when lit, that the iris and master black controls are active (in panel active state set by the PANEL ACTIVE button). When the indicator is lit, the iris and master black can be adjusted from the CCU.

**Note**

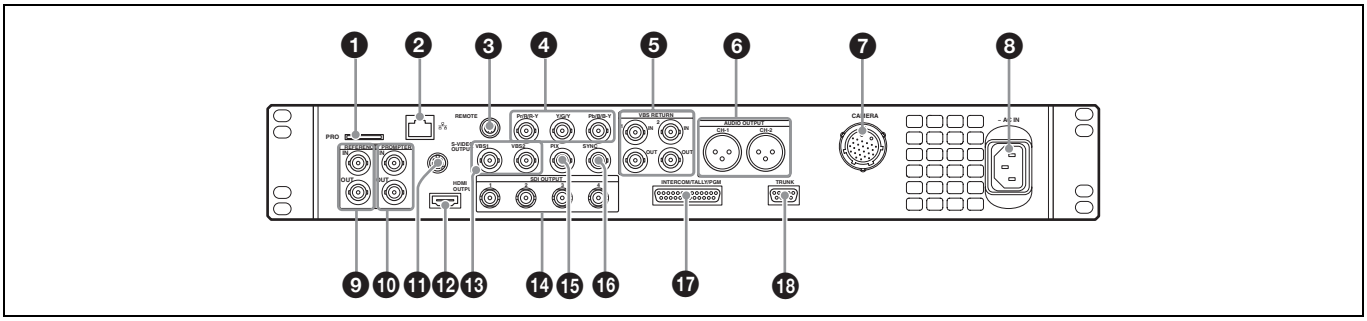
The indicator is not lit when the iris and master black controls in the RCP-1000-series Remote Control Panel are active.

- **IRIS (iris adjustment) knob**

When the AUTO button is not lit: Adjusts the lens iris manually.
When the AUTO button is lit: Finely adjusts the auto adjusted iris value.
The adjustment can be set to relative or absolute value mode on the <FRONT PANEL 1> page in the CCU CONFIGURATION menu. The default value is absolute value mode.

*See "IRIS" on <FRONT PANEL 1> on page 27 and "IRIS" on <FRONT PANEL 2> on page 28.*

## Rear Panel




**❶ "Memory Stick" slot**
For service use only.

**❷ LAN jack (RJ-45, 8-pin)**
Connects to a LAN hub (10BASE-T/100BASE-TX), when using a network connection, via a LAN cable (shielded type, category 5 or higher).

**CAUTION**

- For safety, do not connect the connector for peripheral device wiring that might have excessive voltage to this port. Follow the instructions for this port.
- When you connect the LAN cable of the unit to peripheral device, use a shielded-type cable to prevent malfunction due to radiation noise.

**ATTENTION**

Par mesure de sécurité, ne raccordez pas le connecteur pour le câblage de périphériques pouvant avoir une tension excessive à ce port. Suivez les instructions pour ce port.

**VORSICHT**

Aus Sicherheitsgründen nicht mit einem Peripheriegerät-Anschluss verbinden, der zu starke Spannung für diese Buchse haben könnte. Folgen Sie den Anweisungen für diese Buchse.

**❸ REMOTE connector (8-pin)**
Transmits and receives control signals from the RCP-1000-series Remote Control Panel via a CCA-5 cable (optional). It also supplies power when connected to an RCP-1000-series Remote Control Panel.

**❹ Pr/R/R-Y, Y/G/Y, Pb/B/B-Y (component signals) connectors (BNC type)**
Outputs the HD component signals, SD component signals, HD RGB signals, or SD RGB signals from the corresponding connectors.

**❺ VBS RETURN 1, 2 (VBS return video 1, 2) connectors (BNC type)**
**IN**: Inputs the VBS return video signals (2-system).
**OUT**: The input signal is output from the other connector as-is (loop-through output). If the loop-through output is not used, it is automatically connected to a 75 Ω terminator.

**❻ AUDIO OUTPUT CH-1, CH-2 connectors (XLR 3-pin)**
Outputs audio signals from the camera AUDIO 1 IN and AUDIO 2 IN connectors.

**❼ CAMERA connector (multi-core connector)**
Connects to the camera via a multi-core cable. The camera sends all video and audio signals to the CCU, and the CCU sends control signals, return video, audio signals and power to the camera over a single multi-core cable.

**CAUTION**

CAMERA connector is non LPS (Limited Power Source) circuit. This connector is connected to the HXC-D70.

**❽ AC supply input connector**
Connects to the AC supply via the specified power cord (optional). A plug holder (optional) can be used to secure the power cord to the CCU.

**❾ REFERENCE (reference input) connectors (BNC type)**
**IN**: Inputs an HD tri-level reference sync signal or SD reference sync signal (black burst signal) for external sync.
**OUT**: The input signal is output from the other connector as-is (loop-through output). If the loop-through output is not used, it is automatically connected to a 75 Ω terminator.

**❿ PROMPTER (teleprompter input) connectors (BNC type)**
**IN**: Inputs the VBS signal for the teleprompter.
**OUT**: The input signal is output from the other connector as-is (loop-through output). If the loop-through output is not used, it is automatically connected to a 75 Ω terminator.

**⓫ S-VIDEO OUTPUT connector (4-pin)**
Outputs S-VIDEO signal.

**⓬ HDMI OUTPUT connector (19-pin)**
Outputs HDMI signal for a video monitor compatible with HDMI input.

**Notes**

- When connecting a household television with HDMI input, set its high-resolution function to off to avoid image artifacts.
- Use a Sony high-speed HDMI cable.

**⓭ VBS 1, 2 (composite video signal 1, 2) connectors (BNC type)**
Outputs (2-system) the camera signals in composite signal format.

**⓮ SDI OUTPUT 1 to 4 connectors (BNC type)**
Outputs the camera signals in HD SDI or SD SDI signal format.
The SDI OUTPUT 3 and SDI OUTPUT 4 connectors can also output signals with superimposed character or marker display.

**⓯ PIX (picture monitor output) connector (BNC type)**
Outputs a video signal for a picture monitor. It can also output a signal with superimposed character display.

**⓰ SYNC (sync signal output) connector**
Outputs a sync signal for connection to the sync signal input connector of a waveform monitor or picture monitor.

**⓱ INTERCOM/TALLY/PGM (intercom/tally/program audio) connector (D-sub 25-pin)**
Transmits and receives the various intercom, tally, and program audio signals. It connects to the intercom/tally/program audio connector of the intercom system.

*For information on pin assignment, see "INTERCOM/TALLY/PGM" in "Pin assignment" on page 33.*

**Note**

Depending on the PGM MIX LEVEL settings of the camera, PGM signal may leak into the INTERCOM output. Turn the PGM MIX LEVEL settings down to reduce the signal interference.

**⓲ TRUNK connector (D-sub 9-pin, RS-232C standard)**
Connects to an external device to provide a communication path via the CCU between that device and another external device connected to the TRUNK connector on the camera.

*For information on pin assignment, see "TRUNK" in "Pin assignment" on page 34.*

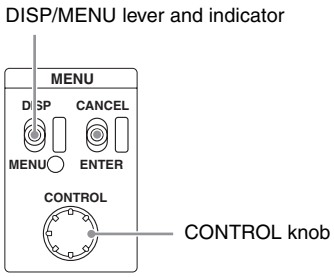
# Status Display

The CCU system status can be monitored using a picture monitor connected to the PIX output.

*For information on monitoring and changing settings, see "Setup Menu" on page 17.*

## Displaying the Status Screen

The status screen is controlled using the knob and levers in the MENU control block on the front panel.




### To display the status screen

Set the DISP/MENU lever to the DISP position.
The most recently viewed status screen page is displayed (when first powered on, the camera settings page is displayed).
Turning the CONTROL knob changes the displayed page.

### To exit the status screen display

In status screen display mode, set the DISP/MENU lever to the DISP position.

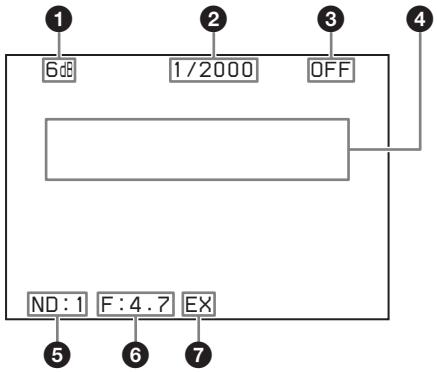
## Status Display Screen

The following information is displayed on the status display screen.

- Camera settings
- System status
- CCU hardware diagnostics
- Camera system diagnostics
- Network diagnostics
- CCU AT board diagnostics
- CCU DPR board diagnostics
- Front panel diagnostics
- Camera hardware diagnostics
- ROM version information for major components

### Camera settings

#### Page 1




**❶ Master gain value**
Video output signal gain (dB units)

**❷ Shutter speed/Clear scan frequency**
Shutter speed value. When ECS is on, the clear scan frequency is displayed.

**❸ Shutter/ECS**
Shutter/ECS on/off indicator

**❹ Camera auto control information area**
**Top**: Displays the Auto Setup category and execution status
**Bottom**: Displays the execution item

**❺ ND filter**
Current ND filter selection

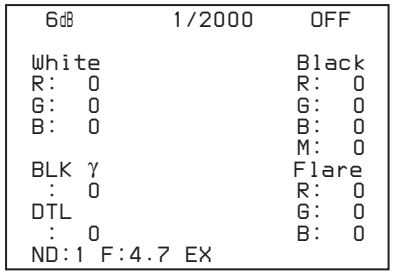
**❻ F-stop value**
Lens F-stop value (iris value)

**❼ EX (lens extender)**
Lens extender indicator

**Notes**

- Items that are turned off using the <DISPLAY> page settings of the CCU CONFIGURATION menu are not displayed.
- A "-" mark is displayed for each item when a camera is not connected.

#### Page 2

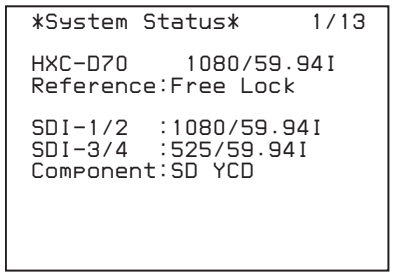



**White**: White balance R/G/B value
**Black**: Black balance R/G/B/Master value
**BLK** γ: Black gamma value
**Flare**: Flare balance R/G/B value
**DTL**: Detail level

**Note**

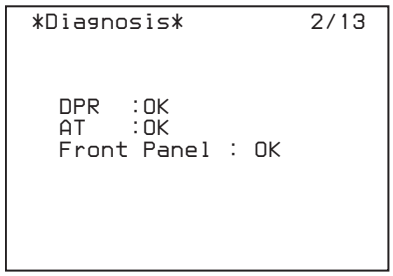
The items along the bottom edge are common to both pages 1 and 2.

## System status




The camera model name and signal format are displayed at the top of the page (a "-" mark is displayed instead when a camera is not connected).
**Reference**: Reference signal format and lock status
**SDI-1/2**: SDI OUTPUT 1/2 connector output format setting
**SDI-3/4**: SDI OUTPUT 3/4 connector output format setting
**Component**: Component signal connector output format setting

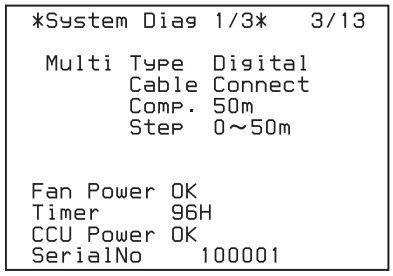
## CCU hardware diagnostics




The camera Auto Setup category, and the corresponding setup item and status are displayed at the top of the page.
**DPR**: DPR board status
**AT**: AT board status
**Front Panel**: Front panel status

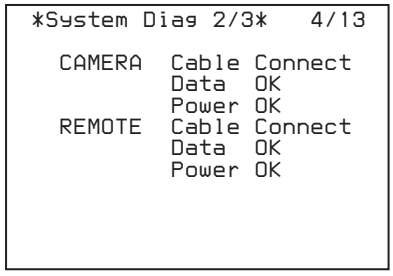
## Camera system diagnostics

### Page 1



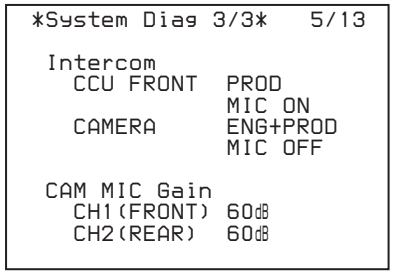

**Multi Type**: Multi-core cable transmission mode
**Multi Cable**: CCU multi-core cable connection status
**Multi Comp.**: Multi-core cable compensation mode selection
**Multi Step**: Multi-core cable length display
**Fan Power**: CCU power supply fan status
**Timer**: Elapsed time since power-on
**CCU Power**: CCU power supply status
**SerialNo**: CCU serial number

### Page 2




**CAMERA Cable**: Camera cable connection status
**CAMERA Data**: Camera data transmission status
**CAMERA Power**: Camera power supply status
**REMOTE Cable**: Remote device cable connection status
**REMOTE Data**: Remote device data transmission status
**REMOTE Power**: Remote device power supply status

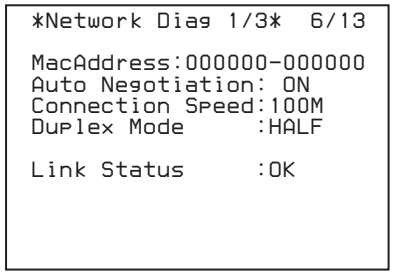
### Page 3




**Intercom CCU FRONT**: CCU intercom selection
**Intercom CAMERA**: Camera intercom channel 1 selection and microphone status
**CAM MIC Gain CH1 (FRONT)**: Amplifier gain for a microphone connected to the camera AUDIO 1 IN connector.
**CAM MIC Gain CH2 (REAR)**: Amplifier gain for a microphone connected to the camera AUDIO 2 IN connector.

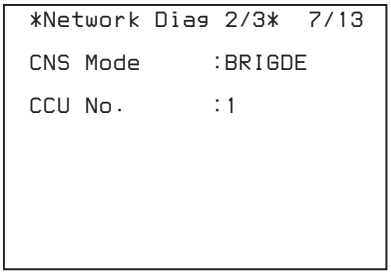
## Network diagnostics

### Page 1



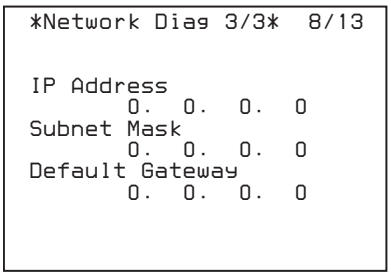

**MacAddress**: MAC address stored in CCU EEPROM
**Auto Negotiation**: Auto negotiation setting
**Connection Speed**: Connection speed setting
**Duplex Mode**: Communication method setting
**Link Status**: Network connection status

**Page 2**



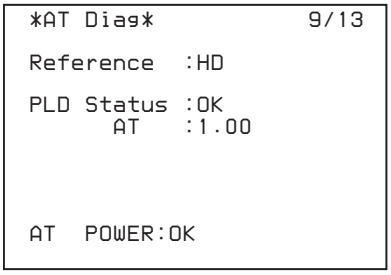

**CNS Mode**: REMOTE and LAN connectors mode setting
**CCU No.**: CCU number setting

**Page 3**



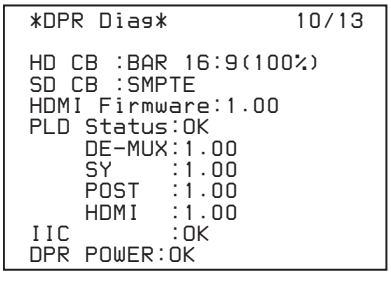

**IP Address**: CCU IP address setting
**Subnet Mask**: CCU subnet mask setting
**Default Gateway**: CCU default gateway setting

## CCU AT board diagnostics



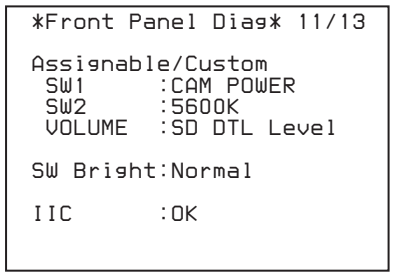

**Reference**: Reference signal setting
**PLD Status**: PLD status
**PLD AT**: AT-PLD version
**AT POWER**: AT board power supply status

## CCU DPR board diagnostics



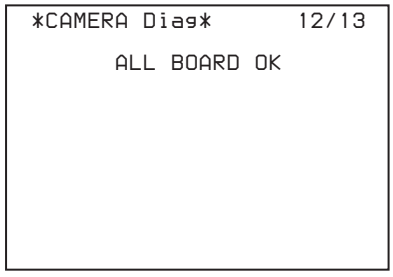

**HD CB**: HD color bar setting
**SD CB**: SD color bar setting
**HDMI Firmware**: HDMI firmware version
**PLD Status**: PLD status
**PLD DE-MUX**: DEMUX-PLD version
**PLD SY**: SY-PLD version
**PLD POST**: POST-PLD version
**PLD HDMI**: HDMI-PLD version
**IIC**: IIC bus control status
**DPR POWER**: DPR board power supply status

## Front panel diagnostics



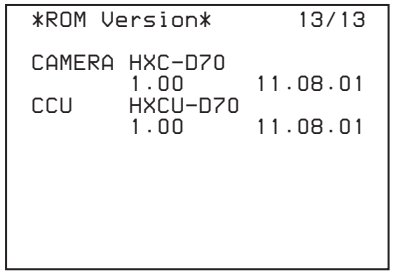

**Assignable/Custom SW1**: Function assigned to the SW1 button
**Assignable/Custom SW2**: Function assigned to the SW2 button
**Assignable/Custom VOLUME**: Function assigned to the CUSTOM knob
**SW Bright**: Button lights LED brightness setting
**IIC**: IIC bus control status

## Camera hardware diagnostics




Displays the camera hardware status.

## ROM Version Information



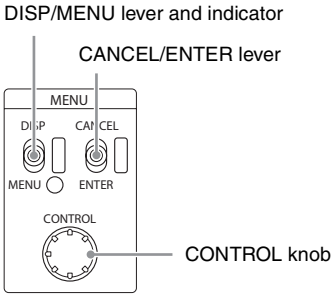

**CAMERA**: Camera model name and ROM version
**CCU**: CCU model name and ROM version

# Setup Menu

The CCU system and peripheral settings can be checked and modified using a picture monitor connected to the PIX output.

## Changing Menu Item Settings

The menu screen is controlled using the knob and levers in the MENU control block on the front panel.
Setting the CANCEL/ENTER lever to the ENTER position and pressing the CONTROL knob perform the same function.




### To display a menu page

Set the DISP/MENU lever to the MENU position.
When first powered on, the CCU MENU page is displayed.

### To display the CCU MENU page

In menu display mode, turn the CONTROL knob to move the pointer (➡) to TOP in the upper right corner of the menu page, then press the CONTROL knob.
The CCU MENU showing the menu configuration is displayed.

```
** CCU MENU **

➔SYSTEM OPERATION
 CCU CONFIGURATION
 NETWORK SETTINGS
```

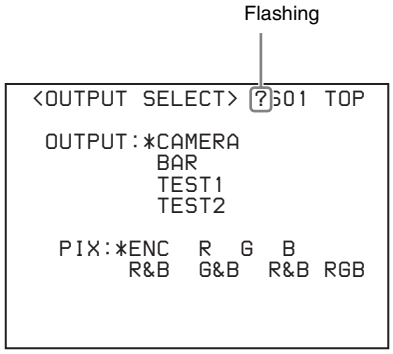
| Menu name | Description |
|---|---|
| SYSTEM OPERATION | Input/output signal format and system-related settings |
| CCU CONFIGURATION | CCU configuration settings |
| NETWORK SETTINGS | Network-related settings |

### To select an item in the CCU MENU

Turn the CONTROL knob to move the pointer (➡) up/down to the desired menu item, then press the CONTROL knob.
The most recently viewed page in the selected menu is displayed.

### To change the displayed page

**1 Turn the CONTROL knob to move the pointer (➡) to the page number, then press the CONTROL knob.**
The pointer (➡) changes to a flashing question mark (?).




**2 Turn the CONTROL knob to change the displayed page to the desired page, then press the CONTROL knob.**
The question mark (?) changes back to the pointer (➡). Items on the page can now be selected and changed.

### To change a menu item setting

If a question mark (?) is displayed beside the page number, press the CONTROL knob to restore the pointer (➡). Items on the page can now be selected and changed.

**1 Turn the CONTROL knob to move the pointer (➡) to the desired item, then press the CONTROL knob.**
The pointer (➡) changes to a flashing question mark (?).

**2 Turn the CONTROL knob to change the setting.**

**To cancel a changed setting**
Set the CANCEL/ENTER lever to the CANCEL position before pressing the CONTROL knob. The item is restored to its current setting.

**To suspend menu changes**
Set the DISP/MENU lever to the MENU position to exit the menu screen.
The DISP/MENU lever can be set to the MENU position again to restart the operation.

**3 Press the CONTROL knob.**
The question mark (?) changes back to the pointer (➡), and the item setting is registered.

**4 Repeat steps 1 to 3 to change other settings on the same page.**

### To enter a character string

Some menu items require a character string input. Moving the pointer (➡) to an item with a character string input and pressing the CONTROL knob displays a rectangular cursor and a list of selectable characters. Turning the CONTROL knob moves the cursor between characters. The following menu item has character strings:

- CCU CONFIGURATION menu → <BAR CHARACTER> page → BAR CHARACTER

**1** **Move the text cursor to the input position, then press the CONTROL knob.**
A second cursor is displayed in the character list.

**2** **Turn the CONTROL knob to move the cursor to the desired character, then press the CONTROL knob.**
Repeat steps **1** and **2** to enter other characters.
- Select INS to insert a space character at the cursor position.
- Select DEL to delete the character at the cursor position.
- Select RET to return to step **1** without changing the string.
- Entering the maximum number of characters (up to the right edge) moves the cursor to ESC on the lower right of the character list.

**3** **Turn the CONTROL knob to move the cursor to END, then press the CONTROL knob.**
The new input string is registered.

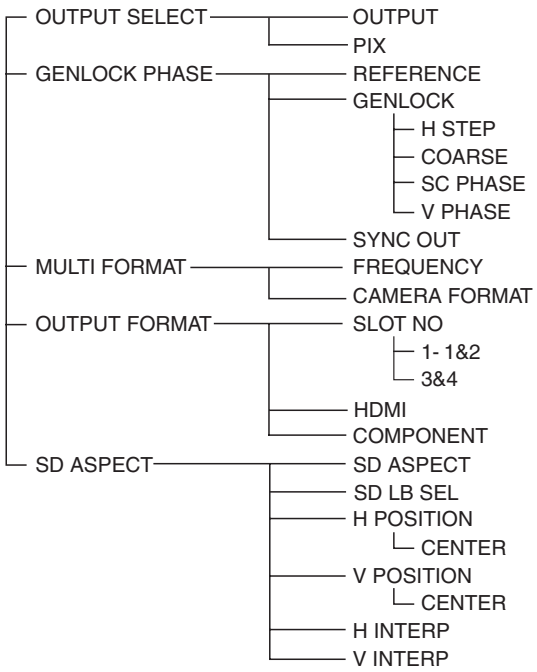
**To cancel the character string setting**
Turn the CONTROL knob to move the cursor to ESC, then press the CONTROL knob.

### To exit the menu display

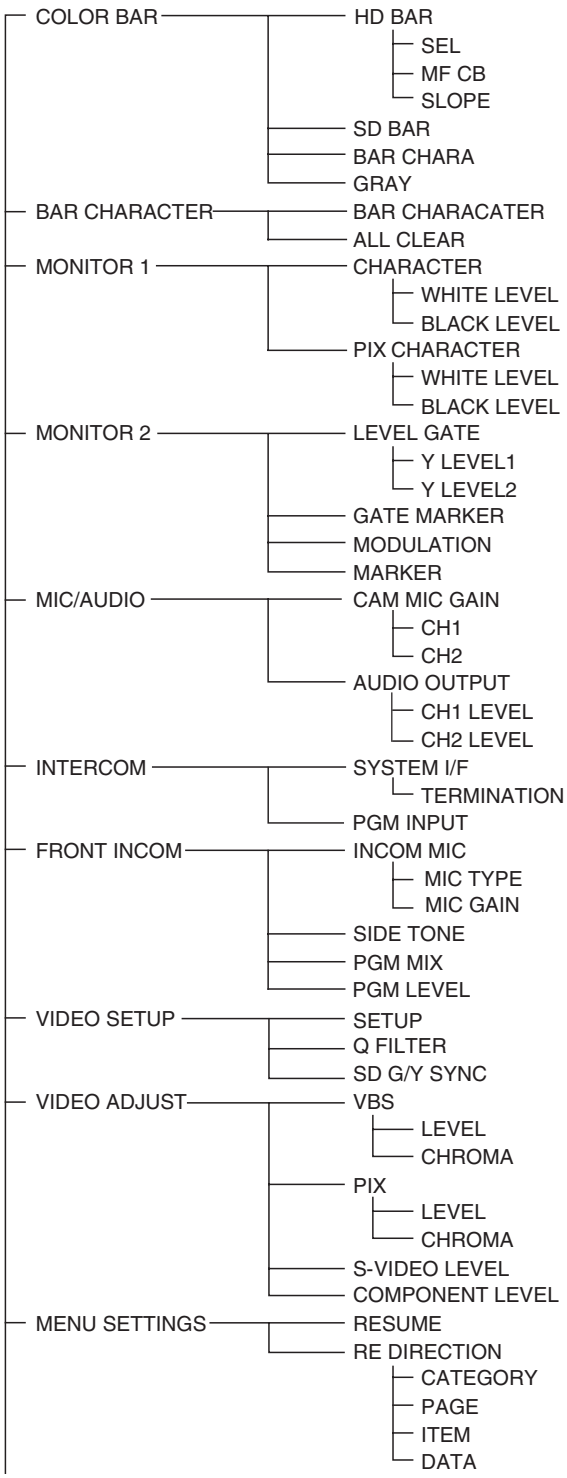
In menu display mode, set the DISP/MENU lever to the MENU position.

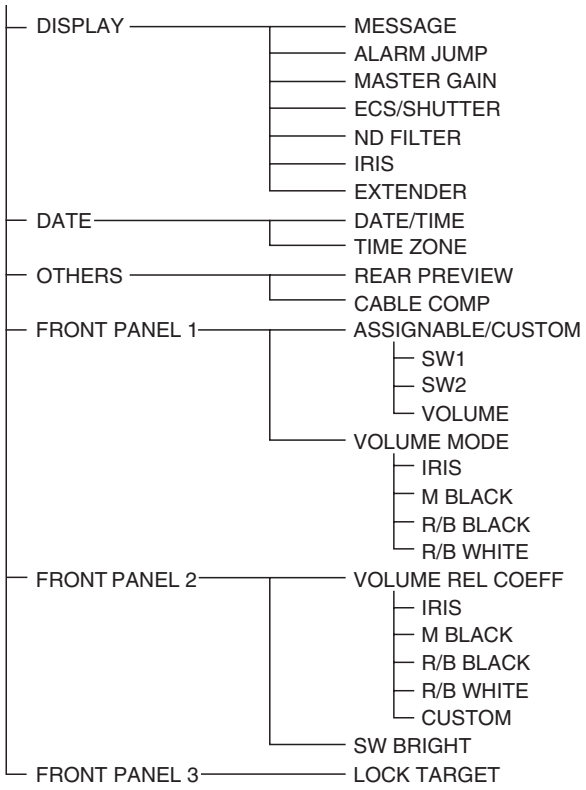
# Menu Tree

## SYSTEM OPERATION menu

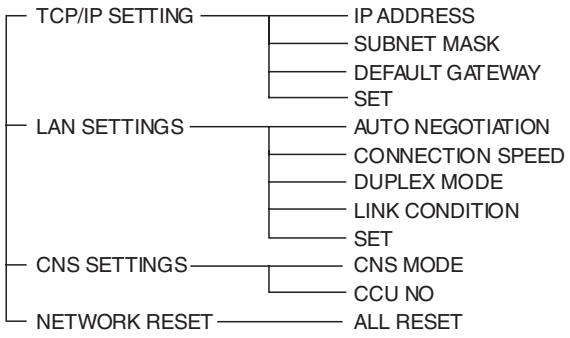



## CCU CONFIGURATION menu






## NETWORK SETTINGS menu



# Menu List

**Note**

The following conventions are used in the menu list table.
**Settings column values** (e.g. **ON**, **OFF**, **0**): Default settings
**Execute by ENTER**: Press the CONTROL knob or move the CANCEL/ENTER lever to the ENTER position to execute.

## SYSTEM OPERATION menu

| SYSTEM OPERATION | | | |
|---|---|---|---|
| **Page name**<br>**Page No.** | **Item** | **Settings** | **Description** |
| <OUTPUT SELECT><br>S01 | OUTPUT | **CAMERA**, BAR, TEST1, TEST2 | Output signal selection<br>TEST1 and TEST2 are not selectable if there is no communication with the camera. |
| | PIX | **ENC**, R, G, B, R&G, G&B, R&B, RGB | PIX connector output signal selection |
| <GENLOCK PHASE><br>S02 | REFERENCE | (NONE), (EXT IN) | Reference signal input status (display only) |
| | GENLOCK | (HD), (**SD**) | CCU GENLOCK mode, lock status, and signal format<br>**(HD):** HD<br>**(SD):** SD |
| | | (OK), (NG) | External reference signal lock status<br>**(OK):** Locked<br>**(NG):** Unlocked |
| | | External reference signal format | Displayed only when a reference signal is present. |
| | | | Reference signal lock phase adjustments |
| | H STEP | When GENLOCK mode is HD: –3.01 to 3.45 µs **0.00**<br>When GENLOCK mode is SD: –8.29 to 9.48 µs **0.00** | Horizontal phase (STEP) |
| | COARSE | –99.9 to 99.9 **0.0** | Horizontal phase |
| | SC PHASE | **0** to 359 | Subcarrier phase |
| | V PHASE | **0** to 7 | Vertical phase (line) |
| | SYNC OUT | HD SYNC, **SD SYNC** | SYNC connector output signal selection |
| <MULTI FORMAT><br>S03<br>**Note**<br>FREQUENCY or CAMERA FORMAT mode setting changes take effect only after the CCU power supply is turned off and then on again. | FREQUENCY | **59.94 Hz**, 50 Hz **(525 NTSC)**, (625 PAL) | Operating frequency selection |
| | CAMERA FORMAT | When FREQUENCY is set to 59.94 Hz: **1080/59.94i**, 720/59.94P<br>When FREQUENCY is set to 50 Hz: 1080/50i, 720/50P | Transmission format selection |

| SYSTEM OPERATION | | | |
|---|---|---|---|
| **Page name**<br>**Page No.** | **Item** | **Settings** | **Description** |
| <OUTPUT FORMAT><br>S04 | SLOT NO | | |
| | 1-1&2 | When CAMERA FORMAT is 1080/59.94i: **1080/59.94i**, 525/59.94i<br>When CAMERA FORMAT is 720/59.94P: 720/59.94P, 525/59.94i<br>When CAMERA FORMAT is 1080/50i: 1080/50i, 625/50i<br>When CAMERA FORMAT is 720/50P: 720/50P, 625/50i | SDI OUTPUT 1/2 connector output format selection<br>Sequence of format options:<br>1: HD<br>2: SD |
| | 3&4 | When CAMERA FORMAT is 1080/59.94i: M1080/59.94i, **M525/59.94i**<br>When CAMERA FORMAT is 720/59.94P: M720/59.94P, M525/59.94i<br>When CAMERA FORMAT is 1080/50i: M1080/50i, M625/50i<br>When CAMERA FORMAT is 720/50P: M720/50P, M625/50i | SDI OUTPUT 3/4 connector output format selection<br>Sequence of format options:<br>1: HD<br>2: SD |
| | HDMI | | HDMI connector output format selection (display only) |
| | COMPONENT | HD RGB, HD YPbPr, SD RGB, **SD YCD** | Component signal connector output format selection |
| <SD ASPECT><br>S05 | SD ASPECT | SQUEEZE, **EDGE CROP**, LETTER BOX | SD output aspect selection |
| | SD LB SEL | **16:9**, 15:9, 14:9, 13:9 | LETTER BOX aspect ratio selection |
| | H POSITION | –99 to 99, (–99) to (99) **0** | Horizontal position setting<br>Settings in ( ): Displayed when SQUEEZE or LETTER BOX is selected in SD ASPECT (display only) |
| | CENTER | **ON**, OFF, (ON), (OFF) | Horizontal centering selection<br>Settings in ( ): Displayed when SQUEEZE or LETTER BOX is selected in SD ASPECT (display only) |
| | V POSITION | –99 to 99, (–99) to (99) **(0)** | Vertical position setting<br>Settings in ( ): Displayed when SQUEEZE or EDGE CROP is selected in SD ASPECT (display only) |
| | CENTER | ON, OFF, **(ON)**, (OFF) | Vertical centering selection<br>Settings in ( ): Displayed when SQUEEZE or EDGE CROP is selected in SD ASPECT (display only) |
| | H INTERP | **A**, B, C, D, E | Down converter horizontal filter selection |
| | V INTERP | **A**, B, C, D, E | Down converter vertical filter selection |

## CCU CONFIGURATION menu

| CCU CONFIGURATION | | | |
|---|---|---|---|
| **Page name**<br>**Page No.** | **Item** | **Settings** | **Description** |
| <COLOR BAR><br>C01 | HD BAR | | |
| | SEL | **BAR 16:9 (100%)**, BAR 16:9 (75%), SMPTE 16:9 (BLACK), SMPTE 16:9 (–I/Q), BAR 4:3 (100%), BAR 4:3 (75%), SMPTE 4:3 (BLACK), SMPTE 4:3 (–I/Q), MF-ARIB (75%), MF-ARIB (100%), MF-ARIB (+I), MF-SMPTE (–I,Q), MF-SMPTE (75%,Q), MF-SMPTE (100%,Q), MF-SMPTE (+I,Q), HD-CUSTOM, SDI CHECK FIELD, Y-RAMP, Y/C-RAMP, HD-CUSTOM2 | HD output color bar settings |
| | MF CB | **MODIFY**, EVEN | Multi-format color bar settings |
| | SLOPE | **WIDE**, NARROW | Chroma band settings for color bars |
| | SD BAR | For NTSC: **SMPTE**, EIA, FULL, 95%, NTSC100%, Y/C-RAMP, Y-RAMP<br>For PAL: **SMPTE**, EIA, EBU, 95%, PAL100%, Y/C-RAMP, Y-RAMP | SD output color bar setting |
| | BAR CHARA | ON, **OFF** | Character superimposed on color bar signal |
| | GRAY | **ON**, OFF | **ON:** Gray screen output when camera power supply is off<br>**OFF:** Color bar signal output when camera power supply is off |
| <BAR CHARACTER><br>C02 | BAR CHARACTER | | Settings for strings 1 to 12 that are superimposed on the color bar signal |
| | <ALL CLEAR> | | Execute to clear all character strings<br>(Execute by ENTER) |
| <MONITOR 1><br>C03 | CHARACTER | | Bar character settings |
| | WHITE LEVEL | 0.0 to 107.0% **71.5** | White level settings for bar character strings |
| | BLACK LEVEL | **0.0** to 107.0% | Black (font border color) level settings for bar character strings |
| | PIX CHARACTER | | PIX output character settings |
| | WHITE LEVEL | **75.0** to 107.0% | White level settings for PIX output character strings |
| | BLACK LEVEL | **0.0** to 25.0% | Black (font border color) level settings for PIX output character strings |

| CCU CONFIGURATION | | | |
|---|---|---|---|
| **Page name**<br>**Page No.** | **Item** | **Settings** | **Description** |
| <MONITOR 2><br>C04 | LEVEL GATE | ---, 1&2, 1, 2, **OFF** | **1&2:** Displays level gate 1&2<br>**1:** Displays level gate 1<br>**2:** Displays level gate 2<br>**---:** Displayed when camera not connected, video output not set to CAMERA, or video output is set to CAMERA and GATE MARKER is ON (display only) |
| | Y LEVEL1 | 0 to 108% **49** **61** | Level gate 1 minimum and maximum detection levels settings |
| | | –99 to 99 **–25** | Level gate 1 zebra range settings |
| | Y LEVEL2 | 0 to 108% **74** **108** | Level gate 2 minimum and maximum detection levels settings |
| | | –99 to 99 **–25** | Level gate 2 zebra range settings |
| | GATE MARKER | ---, ON, **OFF** | Gate signal display on/off settings<br>---: Displayed when camera not connected (display only) |
| | | –99 to 99 **0** | Gate signal level settings |
| | MODULATION | ---, ON, **OFF** | 4:3 aspect ratio mask function on/off settings when EDGE CROP is ON<br>---: Displayed when camera not connected (display only) |
| | | –99 to 99 **0** | Mask video level settings |
| | MARKER | ON, **OFF** | Marker signal on/off settings |
| | | **4:3**, 13:9, 14:9, EU VISTA, VISTA, CINEMA, FOLLOW DC | Superimposed marker signal selection |
| <MIC/AUDIO><br>C05 | CAM MIC GAIN | | Microphone gain settings |
| | CH1 | ---, 20, 30, 40, 50, **60** dB | Settings vary depending on microphones |
| | CH2 | ---, 20, 30, 40, 50, **60** dB | **---:** Displayed when camera not connected (display only) |
| | AUDIO OUTPUT | | Audio output level settings |
| | CH1 LEVEL | –20, **0**, +4 dBu | CH1 output level settings |
| | CH2 LEVEL | –20, **0**, +4 dBu | CH2 output level settings |
| <INTERCOM><br>C06 | SYSTEM I/F | **4WIRE**, RTS, CLEAR COM | Intercom interface (D-sub 25-pin) settings |
| | TERMINATION | (**OFF**), ON, OFF | Connects to a 200 Ω terminator, if ON is selected while 2-wire intercom interface (RTS or CLEAR COM) is used<br>(OFF): Displayed when 4WIRE is selected in SYSTEM I/F (display only) |
| | PGM INPUT | –20, **0**, +4 dBu | PGM input level settings |

| CCU CONFIGURATION | | | |
|---|---|---|---|
| **Page name**<br>**Page No.** | **Item** | **Settings** | **Description** |
| <FRONT INCOM><br>C07 | | (MIC ON), (MIC OFF), (PGM ON) | CCU front panel MIC/PGM switch position (display only) |
| | | (PROD), (ENG) | CCU front panel INTERCOM switch position (display only) |
| | INCOM MIC | CARBON, ECM, **DYNAMIC** | Headset microphone type connected to INTERCOM on the front panel<br>**CARBON:** Carbon microphone (power supply, 20 dB gain)<br>**ECM:** Electret condenser microphone (power supply, 40 dB gain)<br>**DYNAMIC:** Dynamic microphone (no power supply, 60 dB gain) |
| | MIC TYPE | BALANCE, **UNBALANCE** | Headset microphone type connected to INTERCOM on the front panel<br>**BALANCE:** Balanced microphone<br>**UNBALANCE:** Unbalanced microphone |
| | MIC GAIN | –6dB, **0dB**, +6dB | Input gain setting |
| | SIDE TONE | 0 to 99 **50** | Side tone level settings |
| | PGM MIX | **OFF**, INCOM+PGM, L-INCOM/R-PGM | **OFF:** Signals are not mixed.<br>**INCOM+PGM:** INCOM and PGM signals are mixed.<br>**L-INCOM/R-PGM:** Outputs an INCOM signal through the left channel and a PGM signal through the right |
| | PGM LEVEL | 0 to 99 **50** | PGM level settings |
| <VIDEO SETUP><br>C08 | SETUP | ON, **OFF**, -- | **ON:** Adds a setup signal to VBS and SD YCD component signal Ych-SYNC<br>**OFF:** No setup signal is added.<br>**--:** Displayed when format is PAL (display only) |
| | Q FILTER | **NARROW**, WIDE, -- | Q FILTER bandwidth setting<br>**--:** Displayed when format is PAL (display only) |
| | SD G/Y SYNC | **ON**, OFF | SD RGB component signal Gch-SYNC or SD YCD component signal Ych-SYNC on/off |
| <VIDEO ADJUST><br>C09 | VBS | | VBS output settings |
| | LEVEL | –99 to 99 **0** | VBS output level settings |
| | CHROMA | –99 to 99 **0** | Chroma settings for VBS output |
| | PIX | | PIX output settings |
| | LEVEL | –99 to 99 **0** | PIX output level settings |
| | CHROMA | –99 to 99 **0** | Chroma settings for PIX output |
| | S-VIDEO LEVEL | –99 to 99 **0** | S-VIDEO signal level settings |
| | COMPONENT LEVEL | –99 to 99 **0** | Component signal level settings |

| CCU CONFIGURATION | | | |
|---|---|---|---|
| **Page name**<br>**Page No.** | **Item** | **Settings** | **Description** |
| <MENU SETTINGS><br>C10 | RESUME | **ON**, OFF | In menu mode, resume display of previously displayed page function |
| | RE DIRECTION | | CONTROL knob operating mode settings |
| | CATEGORY | **STD**, RVS | **STD:** CONTROL knob clockwise rotation moves the CCU MENU pointer (➡) down<br>**RVS:** CONTROL knob counterclockwise rotation moves the CCU MENU pointer (➡) down |
| | PAGE | **STD**, RVS | **STD:** CONTROL knob clockwise rotation displays the next page in the menu<br>**RVS:** CONTROL knob counterclockwise rotation displays the next page in the menu |
| | ITEM | **STD**, RVS | **STD:** CONTROL knob clockwise rotation moves the pointer (➡) down to the next item on the page<br>**RVS:** CONTROL knob counterclockwise rotation moves the pointer (➡) down to the next item on the page |
| | DATA | **STD**, RVS | **STD:** CONTROL knob clockwise rotation selects the next data option<br>**RVS:** CONTROL knob counterclockwise rotation selects the next data option |
| <DISPLAY><br>C11<br>Camera messages and switch settings on/off.<br>Displayed on the camera diagnostics screen. | MESSAGE | **ALL**, WARNING, OFF | **ALL:** Displays all messages<br>**WARNING:** Displays system warning messages and menu control messages<br>**OFF:** Displays only menu control messages |
| | ALARM JUMP | ON, **OFF** | In menu mode, jump to display page if an error occurs function |
| | MASTER GAIN | **ON**, OFF | Displays or hides the master gain indication |
| | ECS/SHUTTER | **ON**, OFF | Displays or hides the ECS/shutter indication |
| | ND FILTER | **ON**, OFF | Displays or hides the ND filter indication |
| | IRIS | **ON**, OFF | Displays or hides the IRIS indication |
| | EXTENDER | **ON**, OFF | Displays or hides the EXTENDER indication |
| <DATE><br>C12 | DATE/TIME | 20YY/MM/DD hh:mm<br>Time displayed in 24-hour format | Date and time settings |
| | TIME ZONE | hh:mm<br>−11h59m to +11h59m | Time zone setting |
| <OTHERS><br>C13 | REAR PREVIEW | **MOMENTARY**, TOGGLE | REMOTE device preview operation switching<br>**MOMENTARY:** Display preview while PREVIEW button on REMOTE device is pressed<br>**TOGGLE:** Toggle preview on/off when the PREVIEW button on REMOTE device is pressed |
| | CABLE COMP | **25m**, 50m, 75m, 100m | Cable compensation settings for frequency losses in return video and prompter video inputs |

| CCU CONFIGURATION | | | |
|---|---|---|---|
| **Page name**<br>**Page No.** | **Item** | **Settings** | **Description** |
| <FRONT PANEL 1><br>C14 | ASSIGNABLE/CUSTOM | | |
| | SW1 | **NOT ASSIGN**, GAMMA OFF, HD DTL OFF, SD DTL OFF, BLK GAMMA, KNEE OFF, AUTO KNEE, 5600K, CAM POWER | Front Panel SW1 button assignment<br>**NOT ASSIGN:** Not assigned (indicator always off)<br>**GAMMA OFF:** Gamma off when indicator on<br>**HD DTL OFF:** HD detail off when indicator on<br>**SD DTL OFF:** SD detail off when indicator on<br>**BLK GAMMA:** Black gamma on when indicator on<br>**KNEE OFF:** Knee off when indicator on<br>**AUTO KNEE:** Auto knee on when indicator on<br>**5600K:** 5600K on when indicator on<br>**CAM POWER:** Camera power on when indicator on |
| | SW2 | **NOT ASSIGN**, GAMMA OFF, HD DTL OFF, SD DTL OFF, BLK GAMMA, KNEE OFF, AUTO KNEE, 5600K, CAM POWER | Front Panel SW2 button assignment<br>**NOT ASSIGN:** Not assigned (indicator always off)<br>**GAMMA OFF:** Gamma off when indicator on<br>**HD DTL OFF:** HD detail off when indicator on<br>**SD DTL OFF:** SD detail off when indicator on<br>**BLK GAMMA:** Black gamma on when indicator on<br>**KNEE OFF:** Knee off when indicator on<br>**AUTO KNEE:** Auto knee on when indicator on<br>**5600K:** 5600K on when indicator on<br>**CAM POWER:** Camera power on when indicator on |
| | VOLUME | **NOT ASSIGN**, HD GAMMA, SD GAMMA, HD DTL LEVEL, SD DTL LEVEL, BLK GAMMA | Front Panel CUSTOM knob assignment<br>**NOT ASSIGN:** Not assigned (knob deactivated)<br>**HD GAMMA:** HD M-gamma setting<br>**SD GAMMA:** SD M-gamma setting<br>**HD DTL LEVEL:** HD detail level setting<br>**SD DTL LEVEL:** SD detail level setting<br>**BLK GAMMA:** Black gamma setting |
| | VOLUME MODE | | |
| | IRIS | REL, **ABS** | IRIS knob operating mode<br>**REL:** Relative value mode<br>**ABS:** Absolute value mode |
| | M BLACK | **REL**, ABS | MASTER BLACK knob operating mode<br>**REL:** Relative value mode<br>**ABS:** Absolute value mode |
| | R/B BLACK | **REL/BLACK**, ABS/BLACK, REL/FLARE, ABS/FLARE | BLACK/FLARE knob function and operating mode<br>**REL/BLACK:** BLACK (relative value mode)<br>**ABS/BLACK:** BLACK (absolute value mode)<br>**REL/FLARE:** FLARE (relative value mode)<br>**ABS/FLARE:** FLARE (absolute value mode) |
| | R/B WHITE | **REL**, ABS | WHITE knob operating mode<br>**REL:** Relative value mode<br>**ABS:** Absolute value mode |

| CCU CONFIGURATION | | | |
|---|---|---|---|
| **Page name**<br>**Page No.** | **Item** | **Settings** | **Description** |
| <FRONT PANEL 2><br>C15 | VOLUME REL COEFF | | |
| | IRIS | 1/1, **1/2**, 1/4 | Relative coefficient when the IRIS knob is set to relative value mode<br>**1/1:** Variable range roughly 100% of total variation<br>**1/2:** Variable range roughly 50% of total variation<br>**1/4:** Variable range roughly 25% of total variation |
| | M BLACK | 1/1, 1/2, **1/4** | Relative coefficient when the MASTER BLACK knob is set to relative value mode<br>**1/1:** Variable range roughly 100% of total variation<br>**1/2:** Variable range roughly 50% of total variation<br>**1/4:** Variable range roughly 25% of total variation |
| | R/B BLACK | 1/1, **1/2,** 1/4, (FLARE) | Relative coefficient when the BLACK/FLARE knob is set to relative value mode<br>**1/1:** Variable range roughly 100% of total variation<br>**1/2:** Variable range roughly 50% of total variation<br>**1/4:** Variable range roughly 25% of total variation<br>**(FLARE):** Displayed when the BLACK/FLARE knob is assigned to the FLARE function (display only) |
| | R/B WHITE | 1/1, 1/2, **1/4** | Relative coefficient selection when the WHITE knob is set to relative value mode<br>**1/1:** Variable range roughly 100% of total variation<br>**1/2:** Variable range roughly 50% of total variation<br>**1/4:** Variable range roughly 25% of total variation |
| | CUSTOM | 1/1, **1/2**, 1/4 | Relative coefficient when the CUSTOM knob is set to relative value mode<br>**1/1:** Variable range roughly 100% of total variation<br>**1/2:** Variable range roughly 50% of total variation<br>**1/4:** Variable range roughly 25% of total variation |
| | SW BRIGHT | **NORMAL**, LOW | Front panel button lights LED brightness |

| CCU CONFIGURATION | | | |
|---|---|---|---|
| **Page name**<br>**Page No.** | **Item** | **Settings** | **Description** |
| <FRONT PANEL 3><br>C16 | (LOCK TARGET) | AWB: **ON**, OFF<br>ABB: **ON**, OFF<br>ATW: **ON**, OFF<br>BARS: **ON**, OFF<br>CALL: ON, **OFF**<br>PANEL: ON, **OFF**<br>A-SW1: **ON**, OFF<br>A-SW2: **ON**, OFF<br>INCOM: **ON**, OFF<br>STANDARD: **ON**, OFF<br>IRIS AT: **ON**, OFF<br>SHUT-ECS: **ON**, OFF<br>SHUT: **ON**, OFF<br>GAIN-U/D: **ON**, OFF<br>SHUT-U/D: **ON**, OFF<br>PRST WHT: **ON**, OFF<br>VOLUME: **ON**, OFF<br>MENU: **ON**, OFF | Allows you to specify buttons on the front panel to be locked. |

## NETWORK SETTINGS menu

| NETWORK SETTINGS | | | |
|---|---|---|---|
| **Page name**<br>**Page No.** | **Item** | **Settings** | **Description** |
| <TCP/IP SETTING><br>N01 | IP ADDRESS | **0.0.0.0** to 255.255.255.255 | Displays IP address |
| | SUBNET MASK | **0.0.0.0** to 255.255.255.254 | Displays subnet mask |
| | DEFAULT GATEWAY | **0.0.0.0** to 255.255.255.255 | Displays default gateway |
| | SET | | A “SET OK?” message is displayed. Press ENTER again to confirm the change.<br>(Execute by ENTER) |
| <LAN SETTINGS><br>N02 | AUTO NEGOTIATION | **ON**, OFF | Select whether to automatically set the connection speed and communication system according to the device connected. |
| | CONNECTION SPEED | 10M, **100M** | Connection speed selection<br>**10M:** 10BASE-TX<br>**100M:** 100BASE-TX<br>Available only when OFF is selected in AUTO NEGOTIATION |
| | DUPLEX MODE | HALF, **FULL** | Communication system selection<br>**HALF:** Half-duplex communication<br>**FULL:** Full-duplex communication<br>Available only when OFF is selected in AUTO NEGOTIATION |
| | LINK CONDITION | (DOWN), (UP) | Displays connection status (display only)<br>**(DOWN):** Connection failure<br>**(UP):** Connection successful |
| | SET | | A “SET OK?” message is displayed. Press ENTER again to confirm the change.<br>(Execute by ENTER) |

| NETWORK SETTINGS | | | |
|---|---|---|---|
| **Page name**<br>**Page No.** | **Item** | **Settings** | **Description** |
| <CNS SETTINGS><br>N03 | CNS MODE | **LEGACY**, BRIDGE | Network connection mode selection<br>**LEGACY:** External controller connected using CCA-5 cable only<br>**BRIDGE:** External controller connected using point-to-point LAN cable |
| | CCU NO | **0** to 96, A to Z | CCU number settings |
| <NETWORK RESET><br>N04 | ALL RESET | | A “NET SETTINGS RESET OK?” message is displayed. Press ENTER again to reset NETWORK SETTINGS menu items to factory default values.<br>(Execute by ENTER) |

# Appendix

## Notes on Use

### Use and storage locations

Avoid using or storing the unit in the following places:

- Where it is subject to extremes of temperature (operating temperature: 5 °C to 40 °C (41 °F to 104 °F)). Note that in summer the temperature in a car with the windows closed can reach 50 °C (122 °F).
- Very damp or dusty places.
- Where rain is likely to reach the unit.
- Places subject to severe vibration.
- Near strong magnetic fields.
- Near transmitting stations generating strong radio waves.

### Avoid violent impacts

Dropping the unit, or otherwise imparting a violent shock to it, is likely to cause it to malfunction.

### Do not cover with cloth

While the unit is in operation, do not cover it with a cloth or other material. This can cause the temperature to rise, leading to a malfunction.

### After use

Set the POWER switch on the CCU to the OFF position.

### Care

If the body or panels of the unit become dirty, wipe them with a dry cloth. For severe dirt, use a soft cloth steeped in a small amount of neutral detergent, then wipe dry. Do not use volatile solvents such as alcohol or thinners, as these may damage the finish.

## Low-loss Digital Transmission via Multi-core Cable

Digital data transmission between the camera and CCU minimizes image degradation regardless of transmission distance. However, some errors, for example errors due to external noise in long-distance transmission, may be corrected by partial image interpolation of images in frame store.

### Multi-core transmission distances

The transmission distance allowed for Sony CCZ-A multi-core cable[1)] connections is between 5 m and 100 m[2)]. The distance may decrease depending on the conditions, such as cable degradation.

1) CCZ-A5/10/25/50/100 cable

2) Based on a single CCZ-A100 cable used. Transmission range may vary when more than one cable is used.

**Notes on using cable extension connectors (CCZZ-1E, CCZZ-1B):**

Avoid using more than three connectors at the same time. Transmission range may decrease by 10 m when one cable connector is used.

**Examples of cable connection**

An equivalent cable length of up to 100 m is approved. With a length of more than 100 m, losses in the cable will not be compensated properly.

| Cable length | Connections | Approved/Disapproved |
|---|---|---|
| 100 m | 100 m cable (×1) | Approved |
| | 50 m cables (×2) | Disapproved<br>Equivalent cable length: 50 + 50 + 10 (connector) = 110 m |
| | 50 m cable (×1) and 25 m cables (×2) | Disapproved<br>Equivalent cable length: 50 + 25 + 25 + 10 + 10 (2 connectors) = 120 m |
| | 25 m cables (×4) | Disapproved<br>Equivalent cable length: 25 + 25 + 25 + 25 + 10 + 10 +10 (3 connectors) = 130 m |
| 85 m | 50 m cable (×1) and 25 m cable (×1) and 10 m cable (×1) | Disapproved<br>Equivalent cable length: 50 + 25 + 10 + 10 +10 (2 connectors) = 105 m |
| 75 m | 50 m cable (×1) and 25 m cable (×1) | Approved<br>Equivalent cable length: 50 + 25 + 10 (connector) = 85 m |
| | 25 m cables (×3) | Approved<br>Equivalent cable length: 25 + 25 + 25 + 10 + 10 (2 connectors) = 95 m |
| 50 m | 50 m cable (×1) | Approved |
| | 25 m cables (×2) | Approved<br>Equivalent cable length: 25 + 25 + 10 (connector) = 60 m |

## Error Messages

When an error is detected in the CCU or the camera, the ALARM indicator turns on and an error message is displayed on the CCU.

| Error message | Indication |
|---|---|
| CCU: GEN LOCK NG | External reference sync error |
| CCU: DPR NG | Front DPR board power supply, PLD error |
| CCU: PS FAN NG | Power supply block fan error |
| CCU: PS CABLE OPEN | CAMERA connector camera open circuit error |
| CCU: PS RCP PWR SUPPLY NG | Remote control panel (connected to REMOTE connector) power supply error |

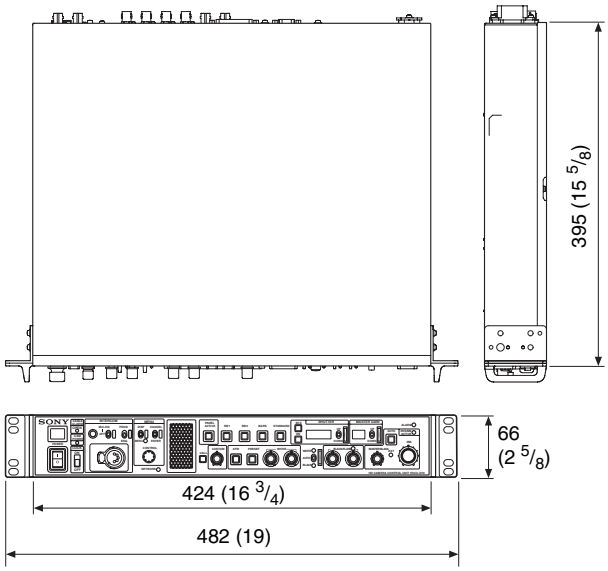
| Error message | Indication |
|---|---|
| CCU: AT NG | Front AT board power supply, PLD error |
| CCU:RX WARNING | Transmission losses between camera and CCU or disapproved cable length for compensation |

# Specifications

## HXCU-D70

| | |
|---|---|
| **General** | |
| Power supply | AC 100 to 240 V, 50/60 Hz |
| Current consumption | 2.2 A (max) |
| Inrush current | (1) Maximum possible inrush current at initial switch-on (Voltage changes caused by manual switching):<br>50A peak, 9.5A r.m.s. (240V AC)<br>(2) Inrush current after a mains interruption of five seconds (Voltage changes caused at zero-crossing):<br>15A peak, 5A r.m.s. (240V AC) |
| Operating temperature | 5 °C to 40 °C (41 °F to 104 °F) |
| Storage temperature | –20 °C to +60 °C (–4 °F to +140 °F) |
| Weight | Approx. 6.5 kg (14 lb 5.3 oz) |
| **Input/output connectors** | |
| CAMERA | Multiconnector (1) |
| INTERCOM | XLR 5-pin (1) |
| INTERCOM/TALLY/ PGM | D-sub 25-pin, female (1)<br>• INTERCOM (PROD, ENG), 4W/RTS/CC, 0 dBu<br>• PGM 1 system, –20/0/+4 dBu<br>• TALLY (R, G)<br>• PREVIEW |
| REMOTE | 8-pin multiconnector (1) |
| TRUNK | D-sub 9-pin, female (1), RS-232C 1 system |
| LAN | 8-pin (1) |
| **Input connectors** | |
| AC IN | (1), AC 100 to 240 V |
| VBS RETURN | BNC type (4), loop-through output, 1.0 Vp-p, 75 Ω, 2 systems |
| REFERENCE | BNC type (2), loop-through output<br>HD: SMPTE 274M, tri-level sync, 0.6 Vp-p, 75 Ω<br>SD: Black burst (NTSC: 0.286 Vp-p, 75 Ω; PAL: 0.3 Vp-p, 75Ω) |
| PROMPTER | BNC type (2), loop-through output, VBS signal, 1.0 Vp-p, 75 Ω, 1 system |
| **Output connectors** | |
| SDI OUTPUT 1 to 4 | BNC type (4)<br>HD SDI: SMTPE 292M, 0.8 Vp-p, 75 Ω, 1.485/1.4835 Gbps bit rate<br>SD SDI: SMPTE 259M, 0.8 Vp-p, 75 Ω, 270 Mbps bit rate<br>HD SDI/SD SDI selectable |
| Pr/R/R-Y, Y/G/Y, Pb/B/B-Y | BNC type (3)<br>• HD component video<br>Y (100% white): 0.7 Vp-p<br>Pr/Pb (75% color bar): 0.7 Vp-p, 75 Ω<br>• HD RGB video<br>R/G/B (100% white): 0.7 Vp-p, 75 Ω<br>• SD RGB video<br>R/G/B (100% white): 0.7 Vp-p, 75 Ω<br>• SD component video<br>Y (100% white): 0.714 Vp-p<br>Pr/Pb (75% color bar): 0.756 Vp-p, 75 Ω |
| VBS1, 2 | BNC type (2), VBS 1.0 Vp-p, 75 Ω |
| PIX | BNC type (1), VBS/R/G/B (VBS 1.0 Vp-p, 75 Ω) |
| SYNC | BNC type (1)<br>HD: BTA-S001A, tri-level sync, 0.6 Vp-p, 75 Ω<br>SD: composite sync, 0.3 Vp-p, 75 Ω<br>HD SYNC/SD SYNC selectable |
| AUDIO OUTPUT CH-1, CH-2 | XLR 3-pin, male (2), 0/–20 dBu |
| S-VIDEO OUTPUT | 4-pin |
| HDMI OUTPUT | Type A, 19-pin |
| **Supplied accessories** | |
| Number plates (1 set) | |
| Operating Instructions: Japanese (1) / English (1) | |
| Warranty booklet (1) | |
| CD-ROM (1) | |
| **Optional accessories** | |
| United States and Canada: Plug holder B (2-990-242-01)<br>Other areas: Plug holder C (3-613-640-01) | |
| United States and Canada: Power cord set (1-551-812-XX)<br>Other areas: Power cord set (1-782-929-XX) | |
| CCA-5-3 (3 m), CCA-5-10 (10 m) connection cables | |
| CCZ-A5/10/25/50/100 multi-core cable | |
| CCZZ-1B, CCZZ-1E cable extension connectors | |
| Service manual | |
| **Related equipment** | |
| HD Color Camera<br>HXC-D70 | |
| RCP-1000-series Remote Control Panel | |

**Dimensions**




Unit: mm (inches)

Design and specifications are subject to change without notice.

**Note**

Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.

## Pin assignment

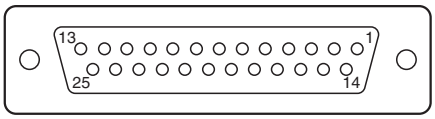
### INTERCOM


- EXT VIEW -

| No. | Signal | Specifications |
|---|---|---|
| 1 | INTERCOM MIC IN (Y)/ (GND)* | -20 dBu (CARBON)<br>-40 dBu (ECM) |
| 2 | INTERCOM MIC IN (X) | -60 dBu<br>(DYNAMIC, BALANCE/ UNBALANCE) |
| 3 | GND | GND |
| 4 | INTERCOM L OUT | |
| 5 | INTERCOM R OUT | |

* When the signal is unbalanced, connect the GND signal of the microphone to pin 1.

### INTERCOM/TALLY/PGM

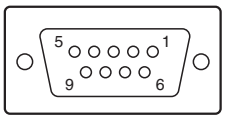



- EXT VIEW -

| No. | Signal | Specifications |
|---|---|---|
| 1 | ENG (R) (X) OUT | ENG SYSTEM RECEIVE |
| 2 | ENG (R) (Y) OUT | 0 dBu BALANCED |
| 3 | ENG (G) | GND for ENG |
| 4 | ENG (T) (X) IN | ENG SYSTEM TALK |
| 5 | ENG (T) (Y) IN | 0 dBu BALANCED |
| 6 | PGM1 (X) IN | -20 dBu/0 dBu/+4 dBu |
| 7 | PGM1 (Y) IN | (Selectable with CCU Menu) |
| 8 | PGM1 (G) IN | |
| 9 | GND | GND for TALLY OUT |
| 10 | PREVIEW OUT | OPEN COLLECTOR (Max. 30 mA) |
| 11 | R TALLY (X) IN | ON: SHORT |
| 12 | R TALLY (G) IN | OFF: OPEN |
| 13 | GND | CHASSIS GND |
| 14 | PROD (R) (X) OUT | PROD SYSTEM RECEIVE |
| 15 | PROD (R) (Y) OUT | 0 dBu BALANCED |
| 16 | PROD (G) | GND for PROD |
| 17 | PROD (T) (X) IN | PROD SYSTEM TALK |
| 18 | PROD (T) (Y) IN | 0 dBu BALANCED |
| 19 | NC | |
| 20 | NC | |
| 21 | GND | CHASSIS GND |

| No. | Signal | Specifications |
|---|---|---|
| 22 | R-TALLY OUT | OPEN COLLECTOR (Max. 30 mA) |
| 23 | G-TALLY OUT | |
| 24 | G TALLY (X) IN | ON: SHORT OFF: OPEN |
| 25 | G TALLY (G) IN | |

**TRUNK**




- EXT VIEW -

| No. | Signal | Specifications |
|---|---|---|
| 1 | NC | |
| 2 | RX IN | TRUNK Data in |
| 3 | TX OUT | TRUNK Data out |
| 4 | NC | |
| 5 | GND | |
| 6 | NC | |
| 7 | NC | |
| 8 | NC | |
| 9 | NC | |

For Customer in China

根据中华人民共和国信息产业部第39号令《电子信息产品污染控制管理办法》及标准中要求的“有毒有害物质或元素名称及含量”等信息，本产品相关信息请参考以下链接:

http://pro.sony.com.cn

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